Canada. Dept. of Defence Production. Report.

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REPORT

of the

DEPARTMENT OF DEFENCE PRODUCTION

January 1 to December 31, 1961

OTTAWA

ELEVENTH REPORT

of the

DEPARTMENT

of

DEFENCE

PRODUCTION

1961

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Honourable RAYMOND O'HURLEY, *Minister*

D. A. GOLDEN, *Deputy Minister*

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To His Excellency Major General Georges P. Vanier, DSO, MC, CD,
Governor-General and Commander-in-Chief of Canada.

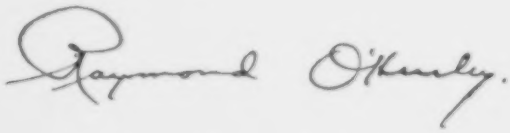
MARCH 3, 1962

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit to Your Excellency the Report of the Department of Defence Production for the calendar year 1961.

A summary of the operations and services rendered by this Department, under their respective headings, is laid before Your Excellency.

Respectfully submitted,



Minister of Defence Production.

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MARCH 2, 1962

The Honourable Raymond O'Hurley, P.C., M.P.,
Minister of Defence Production,
Ottawa, Ontario.

DEAR SIR:

I have the honour to submit the Report of the Department of Defence Production, which covers the operations and services rendered during the calendar year 1961.

Yours faithfully,

Deputy Minister.

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Introduction

UNDER the provisions of the Defence Production Act (R.S.C. 1952, Chapter 62, as amended), the Department of Defence Production has exclusive authority to procure the goods and services required by the Department of National Defence and the responsibility to ensure that the necessary production capacity and materials are available to support the defence production programme.

The Department also serves as procurement agent for the Canadian Commercial Corporation, a Crown company primarily responsible for the purchase in Canada of defence goods required by other governments and of supplies needed to meet Canadian commitments under the Colombo Plan and other international agreements.

Military construction is the prime responsibility of Defence Construction (1951) Limited, a Crown company reporting to Parliament through the Minister of Defence Production.

Three other Crown companies report to Parliament through the Minister of Defence Production. These are Canadian Arsenals Limited, Crown Assets Disposal Corporation and Polymer Corporation Limited.

Production and Procurement

THE supply of goods and services, including construction, for the Canadian defence preparedness programme involved payments to prime contractors totalling $622.5 million in 1961. This was fractionally above the value in 1960 and represents the first increase in such defence spending since 1953. The net value of commitments to business and industry, however, as measured in terms of new contracts and increasing amendments to existing contracts, less decreases and cancellations, was $528.8 million, one-third less than in the preceding year.

Canadian defence contracts placed with prime contractors located outside the country represented 4.9 per cent of the total value of contracts issued during the year. This was a significant decrease from the 10.6 per cent placed abroad in 1960. Although the largest value of the contracts placed abroad, $16.7 million, went to the United States, the value of that country's prime contracts placed in Canada through Canadian Commercial Corporation amounted to $97.5 million. As in past Reports of the Department, these figures refer only to prime contracts and do not reflect the indirect effects of subcontracting or the purchases of components, materials or services by the prime contractors.

Details of the production and procurement programmes, and reports on defence production and development sharing and on defence exports to overseas countries are given in the following pages. An account of the defence construction programme is contained in the Annual Report of Defence Construction (1951) Limited.

Aircraft

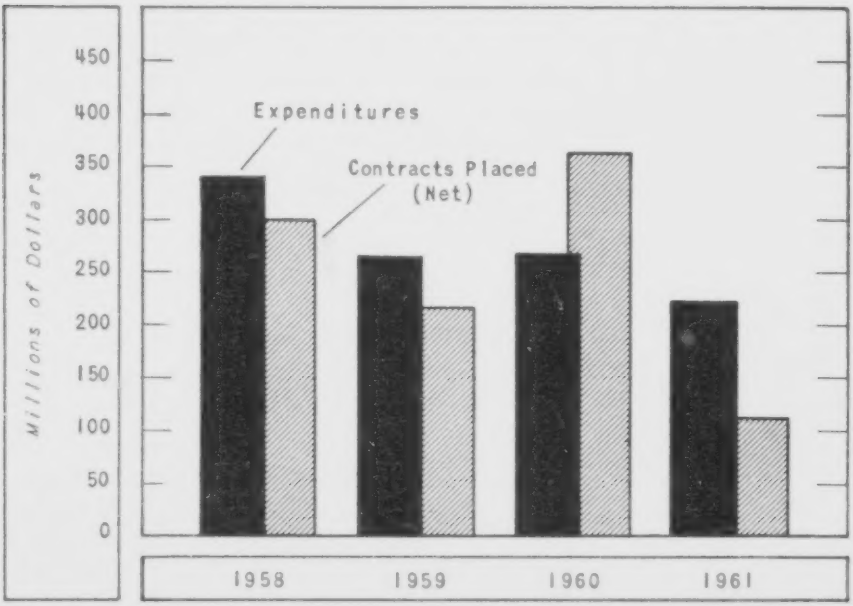
Aircraft and aircraft equipment requirements of the Department of National Defence resulted in expenditures to contractors of $222.5 million in 1961. This is a decrease of $44.3 million from the 1960 level. About 25 per cent of this was for repair and overhaul and 75 per cent was for development, procurement and production of aircraft and related systems.

Deliveries of the CC-106 long-range transport aircraft were completed in 1961.

Initial deliveries of the CF-104 Starfighter commenced during the year and the first two aircraft began a flight test programme at Palmdale, California. Subsequent aircraft produced began a flight test programme at the manufacturer's plant during the fall of the year. Plans were laid to establish a facility in Canada to produce gyros for the CF-104 inertial platform, and it is now expected that

the inertial navigation system will be wholly produced in this country. Canadian sources of supply were also established for CF-104 equipment previously purchased outside the country, such as pylons, tires, wheels, drag chutes, brakes, and instruments. Under an agreement between the Governments of Canada and the United States a number of F-104G aircraft, associated support equipment and initial spares are to be produced in Canada as a $200 million mutual aid programme. The United States is to pay three-quarters of the cost and Canada is to pay one-quarter. These aircraft will be delivered to certain NATO countries beginning in 1963, when production of the aircraft of this type ordered for the First Canadian Air Division in Europe is completed.

Contracts and Expenditures for the Canadian Defence Aircraft Programme



Preliminary discussions and negotiations for the production of a new jet trainer, the CT-114 (CL-41), were commenced late in 1961.

Production of the Mk.1 Caribou aircraft continued during the year, and negotiations were started in connection with sales to the United States Army of additional quantities. Seventy-three of the Mk. 1 Caribou had been sold up to the end of 1961, and in January, 1962, an order for a further 53 was received from the United States.

Twenty-four CH-112 (Hiller UH-12E) light observation helicopters and four Cessna L-19L aircraft were delivered during the year. The United States companies supplying the helicopters were placing subcontract work in Canada on a

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reciprocal basis. Orders were placed for a small number of CH-113 (Vertol 107-II) heavy helicopters, with deliveries scheduled for 1963.

Moderate activity continued on aircraft engine production. Approximately 100 J-79-7 turbo jet engines for the CF-104 aircraft were delivered during the year. Preparatory work was started on the production of J-79-11A engines for the F-104G mutual aid aircraft. Orders were placed for a small quantity of T-58 turboshaft engines for use in search and rescue helicopters.

The phasing out of older types of aircraft coupled with the introduction of new ones has once again caused a decline in work at Canadian repair and overhaul facilities. It is expected, however, that during 1962 a stabilizing effect will be felt within the repair and overhaul sector of the industry and conditions should remain fairly constant for some time. The introduction of more sophisticated aircraft and equipment will have an effect on the type of facility required.

The Aircraft Branch experienced an increase in development and production sharing activity during 1961. Members of the Branch participated actively on various working groups with the United States and NATO, as well as assisting Canadian industry to participate in United States and other foreign defence markets. Significant foreign contracts were placed with the Canadian aircraft industry, with both prime contracts and subcontracts received by Canadian firms showing a marked increase. A few contractors were successful in obtaining foreign defence business in the repair and overhaul field.

In the area of research and development, extensive development was done on the proposed Canadian manufacture of a photographic reconnaissance pod for external fitment to the CF-104 aircraft. Some other NATO countries have indicated an interest in this pod. Contracts were issued for an Earth orbital vehicle escape technique study for the United States Air Force, for development of the CL-91 high mobility tracked vehicle for the United States Army, and for development of the CL-89 surveillance and target acquisition system.

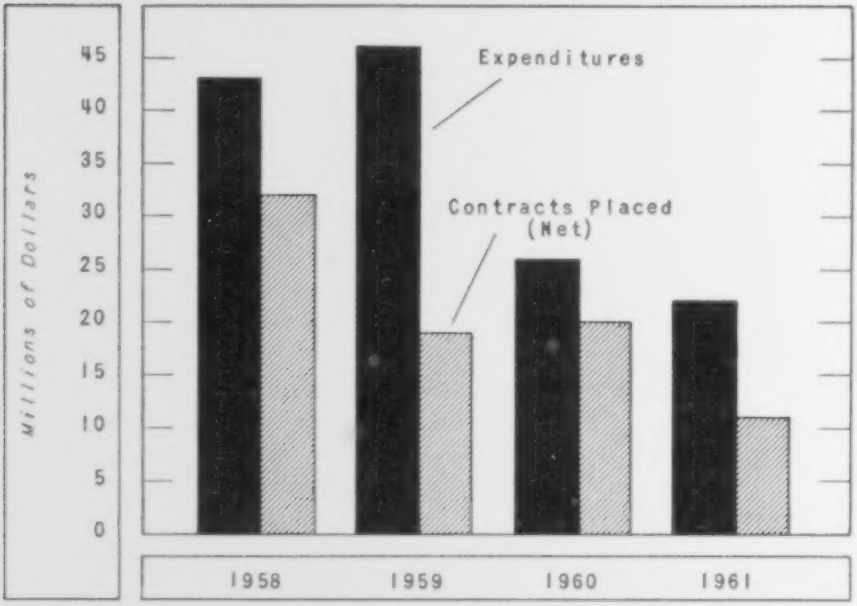
Research and development programmes were also undertaken in co-operation with Canadian manufacturers. One was a study of the feasibility of the design of an all-weather anti-submarine hydrofoil craft and the other was the development and testing of a high lift wing system for a short take-off and landing (STOL) fighter aircraft. The PT-6 turboshaft engine passed an official 50-hour preliminary flight rating test and was being flown in two aircraft. Development continued on a 600 HP gas turbine engine for the United States as a possible replacement for diesel engines in some applications.

Numerous engineering studies relating to future prime movers and lift engines were contracted for on behalf of the Defence Research Board, and preliminary planning commenced on the defence industrial applied research programme in the fields of aeronautics, prime movers and materials.

Armament

Requirements of the Department of National Defence for ammunition and weapons were reduced in 1961, with payments to contractors declining slightly to $22.3 million. In an attempt to offset the effect on industry of this reduction, a strong effort was made to locate and exploit opportunities for Canadian firms to participate in defence development and production programmes of the United States and other NATO countries. This resulted in a significant increase in the value of armament prime contracts and subcontracts placed in Canada by other countries.

Contracts and Expenditures for the Canadian Defence Armament Programme



Production for the Canadian Armed Services was completed on contracts for .30 calibre small arms ammunition, anti-submarine projectiles, pyrotechnic devices and naval gun weathershields. Among the major items under production were practice depth charges, 9mm, 20 pounder and 105mm howitzer ammunition, 4", 3"/50 calibre and 3"/70 calibre naval gun ammunition, torpedo warheads, spares for 3"/70 calibre naval guns, 7.62mm C1 automatic rifles and spares, 9mm sub-machine guns, navigational aids, trainfire target devices, mortar base plates, various types of sights, anti-submarine devices, and high altitude rockets. Production of 105mm armour piercing ammunition, practice bombs and pyrotechnic devices was initiated in 1961. Action towards procurement was taken on

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two new anti-tank weapon systems for the Canadian Army and an improved design of acoustic homing torpedo for the Royal Canadian Navy and the Royal Canadian Air Force. It is expected that these will create increased procurement activity in the weapons systems field in 1962.

In the field of research and development, a feasibility study was undertaken in connection with the launching of test rockets from aircraft to altitudes of 100,000 feet and velocities up to ten times the speed of sound. The Black Brant development programme to meet United States requirements progressed satisfactorily and the Black Brant III is scheduled for flight testing in the Spring of 1962. This project has resulted in a decision by a private company to plan the establishment of production facilities in Canada to manufacture solid rocket propellants, missile motors up to 30 inches in diameter and 30 feet in length, and other missile hardware.

A quantity of nitroguanidine was purchased by the United States Government from the production facility located in this country. The maintenance of this nitroguanidine facility has been jointly financed by Canada and the United States.

During the year the Branch participated actively in the defence production and development sharing programme. It is significant that at least half of the United States defence prime contracting and subcontracting in Canada under the guidance of the Armament Branch was in two new areas of participation: missile hardware and special purpose vehicles designed to meet United States military requirements. The Branch was also active in NATO working groups concerned with joint development programmes in the armament field and was active in encouraging procurement in Canada from Britain and other Commonwealth countries.

Electronics

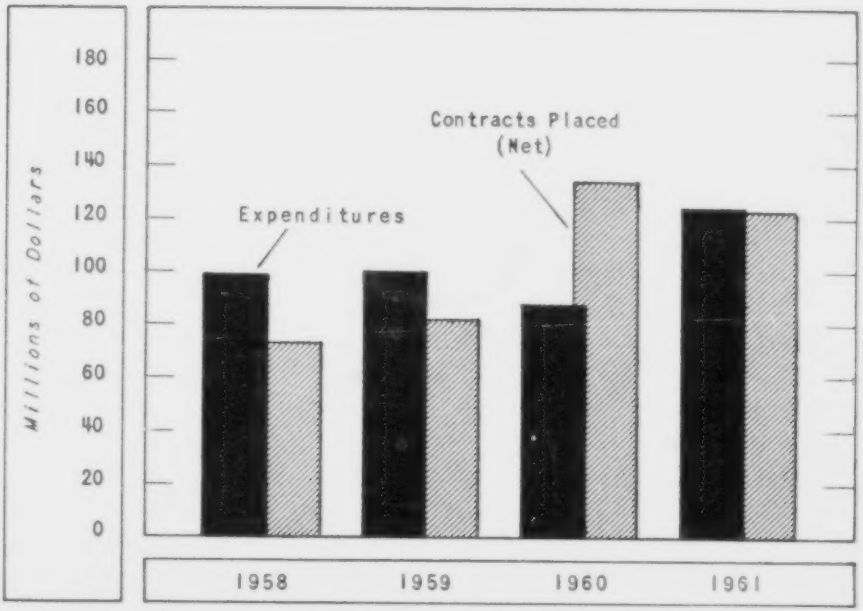
Canadian defence requirements for electronic and communication equipment resulted in an expenditure of $123.8 million in 1961. This is a significant increase over the previous year and reflects the higher level of contracting in 1960. Production and development accounted for two-thirds of the 1961 expenditures, while operating and maintenance requirements accounted for the balance. In addition to expenditures on Canadian defence requirements in this field, some $50 million was spent in Canada for the electronic requirements of other governments.

Production of aircraft electronic equipment continued to be a major sector of the electronics programme, particularly of those items required for the CF-104 aircraft. Canadian production was underway on such items as the NASARR system of fire control and terrain avoidance, bomb toss computers, air data computers and sight optical display and computer equipment for the CF-104. Initial quantities

of some of these items were procured from United States sources to meet the line production requirements of the aircraft until Canadian output was achieved. Planning activities were begun to ensure an adequate supply of electronic items for the F-104G aircraft to be produced under a Canada-United States mutual aid programme. Requirements of other governments, particularly for doppler navigation equipment and position and homing indicators, contributed to the increased production in the field of aircraft electronic equipment.

Production and installation was completed on the microwave air defence communication system (ADCOM) for the Royal Canadian Air Force. Installation of additional heavy radars and their data processing equipment for the general air defence network in Canada was continued. The CADIN/SAGE leased line communications programme was about two-thirds completed at the end of the year. Deliveries were maintained on an airfield traffic control system which will co-ordinate communication facilities for air traffic control at airfields of the Royal Canadian Air Force in Canada and abroad.

Contracts and Expenditures for the Canadian Defence Electronics and Communication Equipment Programme



In connection with the national survival programme, all major items of equipment for the Canadian Army's main communications control centre, which will provide extensive telephone and telegraphic facilities on both line and radio links, were under contract. Contracting and production continued on equipment

for the ten provincial communication centres and the national survival attack warning system. A beginning was made on leasing communication facilities for this programme.

Production of sonar and sonobuoys continued, while production of gyro compasses, logging equipment and plotting tables for the Royal Canadian Navy was completed. Plotting tables were also in production for the United States Navy. Variable depth sonars were manufactured for the Royal Navy and sonobuoys for the United States Navy. A contract was placed for an additional quantity of VT fuses. Work continued on a joint Canada-United States development programme for moored sonobuoys.

In the field of radiac detection equipment, pen and locket type dosimeters for the personal detection of radiation were manufactured in Canada. Preproduction work was done on radiacmeters and chargers, and a radiac activity training kit was produced.

There was a drop in production of radars for air defence systems, but design and production for countermeasure equipment, radomes and counter mortar radars was continued. Electronic counter countermeasure receiver groups were in production, but production of the anti-jamming consoles was awaiting the requirement for spares. These items are for use in the Pinetree Line ground radars. Production neared completion on an order for height finding radars and spares. Modification kits were being produced for two types of radars to enable them to perform an airport surveillance function as well as a ground controlled approach function. Contracts for electronic countermeasure devices and spares for radars were received from the United States Air Force. Requirements for data processing equipment also began to offset the decline in radar production.

Production got underway on a quantity of fixed ground navigation beacons (TACAN) for use at airports in Canada occupied jointly by the Royal Canadian Air Force and the Department of Transport. Contracts were placed for the supply of mobile RAPCON's to improve flying safety conditions at the fighter wings of the First Air Division in Europe. These RAPCON's are complete mobile operations centres including all equipment necessary to control the landing of aircraft under conditions of poor visibility.

Production of training aid simulators continued. The tactical crew procedure trainer for the Argus aircraft and the operational flight trainer for the Yukon (CC-106) aircraft were delivered to the Royal Canadian Air Force. Production proceeded satisfactorily on the CF-104 operational flight and tactics trainer for the Royal Canadian Air Force and other NATO air forces. A models control trainer was completed and delivered to the Royal Canadian Navy.

Maintenance, repair and overhaul, and contracts for leased lines increased significantly during the year as a result of progress on the air defence networks

and the taking over by the Royal Canadian Air Force of some of the United States Air Force Pinetree Line sites. Operation and maintenance of the Mid-Canada Line was continued. Production of component spares for Canadian requirements was reinforced by some production for the United States. The accumulation of necessary engineering and technical knowledge was begun by a Canadian company in connection with a new repair and overhaul programme on the fire control system in the CF-101 Voodoo aircraft.

In order to maintain a satisfactory level of Canadian content in equipment production for both Canadian and external requirements, the Department's programme in support of the establishment of qualified sources for component parts and materials was continued. Support was given to provide qualified sources for such components as military transformers, hydrophones, microwave components for the NASARR system and various sizes of synchros. Industrial initiative in the selection of suitable areas for such support has increased.

With a view to ensuring future production for external requirements, there was continuing activity in support of Canadian industry proposals for the development of new equipment in advance of the formulation of defence requirements. Financial assistance was given for development of such items as a search and rescue beacon, a K-band doppler navigator, the transistorization of doppler equipment for vertical and short take-off and landing application, anti-submarine data processing equipment, and an extended life sonobuoy that can be dropped from aircraft. Consideration was being given to other such proposals from Canadian industry.

A joint Canada-United States financed programme for development in this country of an infrared acquisition unit for the Mauler system was approved and a contract awarded to the Canadian contractor. The Mauler is the United States Army's newest forward area air defence missile system under development, designed to destroy supersonic enemy aircraft, short range ballistic missiles and rockets in the battlefield area.

Planning with the Defence Research Board was begun to provide support for some projects under the new defence industrial applied research programme.

Shipbuilding

The shipbuilding programme in 1961 included work on six destroyer escorts, a tanker-supply vessel, a hydrographic survey vessel, eight auxiliary vessels, numerous small boats, and related design, planning and procurement activity.

Work continued satisfactorily on all six destroyer escorts in the repeat-Restigouche programme. The last two vessels are an improved version of the first four, the major changes being modifications to include a helicopter flight deck

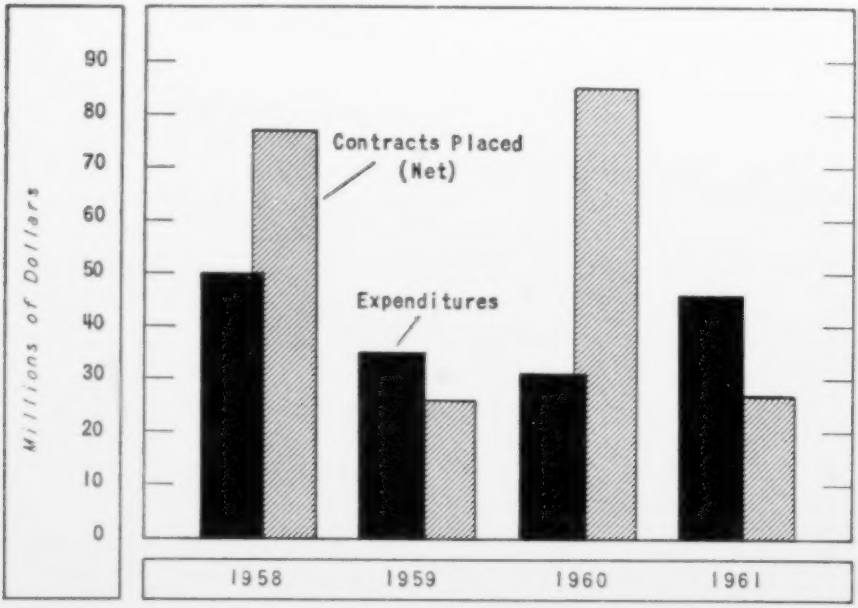
with hangar and the fitting of variable depth sonar equipment. All important contracts were placed for the supply of the necessary components for this programme.

Work on the tanker-supply vessel for the Royal Canadian Navy progressed on schedule. Hull construction and component production proceeded satisfactorily.

A standard diving vessel, a tank cleaning barge and five stevedoring barges were all completed and accepted by the Royal Canadian Navy in 1961. A contract was placed for an additional tank cleaning barge as a result of competitive tenders.

Construction continued on a hydrographic and oceanographic survey vessel for the Department of Mines and Technical Surveys. Specifications for two more hydrographic survey vessels were received and contracting will be undertaken.

Contracts and Expenditures for the Canadian Defence Ships Programme



Drawings and design documents necessary to invite tenders for construction of a Pacific Naval Laboratories research vessel were completed. Drawings for the modernization programme of the St. Laurent class destroyer escorts will be completed early in 1962. Procurement of equipment for this modernization programme is proceeding.

Maintenance of the Fleet involved fifty-four contracts for ship repairs and refits during 1961 at an approximate value of $7.7 million. These contracts were widely distributed.

The majority of contracts for new construction were on a competitive firm price basis. In connection with major repairs and refits, target incentive type contracts were successfully introduced. The general pattern in contracts in both shipbuilding and ship repairing was of a type to encourage cost reductions.

The Naval Shipbuilding Central Procurement Agency continued its operation under the supervision of this Department. This agency is responsible for the bulk purchase, distribution and accounting associated with the supply of much of the equipment and material required to be worked into vessels of the repeat-Restigouche class.

Negotiations were concluded for the establishment in Canada of production facilities for the manufacture of noise reducing five-bladed propellers for naval ships.

The Branch continued to be active in the Canada-United States production and development sharing programme. There was an increase in the prime contracts placed with Canadian manufacturers for such items as motor generators, valves, shafting, propellers and repairs to small vessels.

Machine Tools and Gauges

Machine tools and allied equipment valued at $555,000 were purchased in 1961, of which 87 per cent was required by the Department of National Defence to meet the current requirements of the Armed Forces, and the remainder was purchased for Canadian Arsenals Limited and Canadian Commercial Corporation.

The care, maintenance and custody of standby Crown owned defence assets involved the issuance of contracts amounting to $212,710. These contracts covered the cost of maintaining various facilities in standby condition or in storage, as well as the cost of transportation and the repair and overhaul of a number of machine tools. Capital assets and production tooling for the M51A5 fuse and 2.75″ rocket programmes were transferred to storage. All operations at the Malton and Nobel, Ont., high altitude test facilities were closed down, and a large quantity of capital equipment, test equipment and surplus stores from Nobel was transferred to the National Research Council at Ottawa, Ont. This equipment will be used for further experimental work by the National Research Council and will offset the need to purchase similar material and equipment.

Gauges valued at $78,000 were purchased for the Inspection Services of the Department of National Defence.

The inspection and technical personnel of the Machine Tool Branch continued to be called upon by other branches of the Department for plant surveys, time study reports and other technical assistance involving machine tools and general production capabilities.

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In connection with the defence production and development sharing programme, Canadian machine tool manufacturers began taking an active interest in soliciting United States defence business. Machine tool firms tendered on various types of grinding machines, lathes, special gun drilling machines, tool and cutter grinders, and machines built to special specifications.

General Purchasing

The General Purchasing Branch issued 143,400 contractual documents during 1961 for a wide range of goods and services that are normally available from the domestic market. The value of these contracts amounted to $181.4 million.

The headquarters organization of the Branch placed major contracts for medical and dental stores, lamps, photographic equipment and supplies, canned and preserved foods, paper products, packaging materials, building supplies and hardware, furniture and furnishings, and appliances, as well as other barrack, camp and hospital stores. Also purchased centrally through headquarters were petroleum products and solid fuels, clothing and footwear, electrical power generating control and distribution equipment, aircraft ground handling equipment, and all types of mechanical transport, construction and road maintenance equipment. Services such as repair and overhaul, engineering studies, food catering, aerial surveys, and certain research and development projects were contracted for by the headquarters organization.

Canadian markets were thoroughly explored in order to promote the maximum participation by Canadian industry in the manufacture of ground handling equipment for the CF-104 aircraft. Significant orders were placed with firms in this country for noise suppressors, engine trailers, munition trailers, test equipment, maintenance tools, and combined ground services equipment. Research projects undertaken during the year included an investigation into the use of lignin as a rubber reinforcing agent, a study of the combustion characteristics of liquid hydrogen, and the design and development of a high acuity film processing machine for the United States Air Force. Repair and overhaul contracts were awarded for such items as ground handling equipment for aircraft, aerial cameras, air-sea rescue material, fire fighting equipment, parachutes and mechanical transport. Emergency health and welfare supplies and certain Canadian Army requirements in support of the national survival programme were purchased by headquarters. These included packboards, litters, rope, jacks, pumps, derrick kits, pharmaceuticals, drugs, ration packs, electric warning sirens, detection and fire fighting apparatus, rescue equipment, ladders, shovels, personal protective respiratory apparatus, special filters for installation in military vehicles, and electrical power generating equipment.

A Canadian company was awarded the contract for the initial supply and installation of dual fuel gas turbine generating sets and waste heat boilers at

five radar sites. This equipment will supply electrical power requirements and provide heat for various buildings at these locations. A product improvement programme was undertaken on the "Bobcat" family of light tracked vehicles, and when this phase is completed 20 preproduction pilot vehicles will be manufactured. Initial action was taken to procure textiles and components required to manufacture the various items of apparel comprising the new Army combat uniform. Field boots, produced by the direct moulded sole process, were ordered in Canada for the first time.

A number of substantial purchases were made on behalf of the Colombo Plan for delivery to Pakistan, Ceylon, Indonesia, Vietnam, India and Malaya. These included flour, wood pulp, newsprint, chemical fertilizer, dump trucks, steel towers, electric cables, vertical water wheel generators, turbines, circuit breakers, transformers and insulators.

The fourteen district offices of the Branch arranged contracts with regional suppliers across Canada for fresh food, stores and services required for immediate use by military establishments in the areas concerned. This decentralized procurement activity involved a total of 127,700 contractual documents valued at $59.4 million. The national survival programme increased the procurement tempo throughout the district offices as well as at headquarters. All such requirements were given precedence and the normal procurement period was greatly reduced. The district purchasing agents processed in record time a diversified range of demands covering building materials, extensions to the warning siren system and construction of fallout reporting posts. District purchasing agents attended a conference at headquarters during April for the purpose of exchanging views and developing improved purchasing methods and procedures.

Contracts and Expenditures

Defence procurement and construction contracts issued in 1961 by the Department of Defence Production and its associated Crown company, Defence Construction (1951) Limited, for the Department of National Defence had a net value of $528.8 million. (The net value of contracts is made up of the value of new contracts issued as well as amendments that increased or decreased existing contracts.) Expenditures against these Canadian defence contracts amounted to $622.5 million in 1961, thus reducing by $94 million the outstanding value of defence business held by prime defence contractors.

In addition to these Canadian defence commitments, contracts valued at $172.6 million were placed against this Department's Votes for assistance to defence industry and its Revolving Fund, for other Canadian Government departments and agencies, and for foreign governments.

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The net total of all contracts issued by this Department and Defence Construction (1951) Limited in 1961, therefore, was $701.4 million. This was 23.3 per cent less than the comparable total of $914.0 million in 1960. The net value of contracts according to the various sources for which they were issued is as follows:

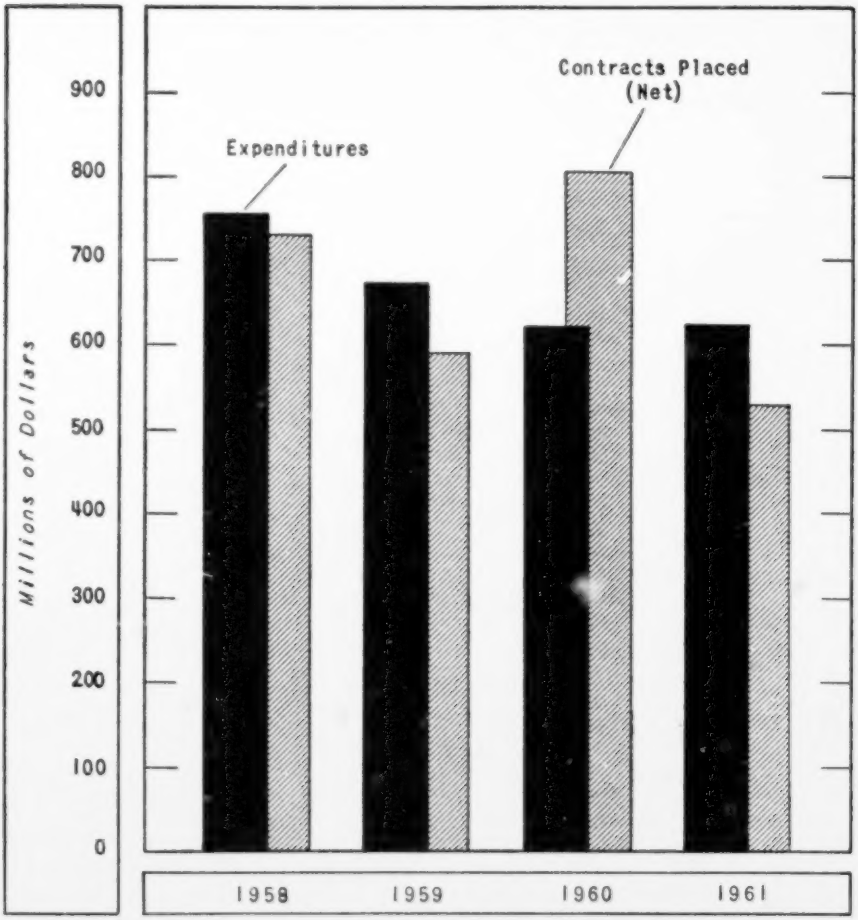
	Net Value	*Per cent of Total Value*
Department of National Defence	$528,773,000	75.4
Department of Defence Production (DDP Votes and Revolving Fund)	56,562,000	8.1
Foreign Governments:		
United States	97,544,000	13.9
Britain	2,053,000	.3
Other Governments	1,006,000	.1
Canadian sources other than DND and DDP:		
Colombo Plan	9,855,000	1.4
Other Canadian sources	5,588,000	.8
TOTAL	$701,381,000	100.0

Contracting for DND—The $528.8 million in Canadian defence contracts placed in 1961 was 34.3 per cent below the value in 1960. The aircraft programme accounted for the major part of this decrease, falling from $363.2 million in 1960 to $113.2 million in 1961. The 1960 value was particularly high, however, because of large-valued contracts placed in connection with Canadian production of CF-104 aircraft. The main new programme in 1961 was for the purchase of helicopters. Increasing commitments were made for CC-106 long-range transport aircraft and for spares and accessories in connection with the CF-104 programme. Repair and overhaul contracts continued in large volume.

Contracts having a net value of $122.6 million were placed for the electronics and communication equipment programme in 1961. This was a decrease of 8.3 per cent from 1960. Increased commitments were made in 1961 for electronic equipment associated with the CF-104 programme, particularly the NASARR system of fire control and terrain avoidance. New contracts were issued for navigation beacons, anti-submarine data processing equipment, sonobuoy transmitters and operational maintenance of the Mid-Canada Line.

Shipbuilding and repairing contracts also declined significantly in 1961, dropping to $26.6 million from $84.7 million in 1960. The large 1960 figure included contracts for four destroyer escorts and a tanker-supply vessel. In 1961, the largest contracts in the ships programme were for the operation of the Naval Central Procurement Agency and for completion of the structure and outfitting of a destroyer escort.

Contracts Placed on Behalf of the Department of National Defence and Expenditures Against Such Contracts



Armament contracts (which include weapons, ammunition and explosives) declined from $19.7 million in 1960 to $11.3 million in 1961. The larger contracts issued were for 105mm shells, 7.62mm cartridges and reworking of 7.62mm C1 rifles.

A contract was issued for completion of the "Bobcat" family of vehicles to the production stage, including a number of preproduction models. Construction contracts increased from $51.6 million in 1960 to $90.7 million in 1961. Contracts for projects associated with the Pinetree Line radar sites, the national survival programme and semi-automatic ground environment (SAGE) installations accounted for much of this increase.

Expenditures on Canadian defence procurement and construction amounted to $622.5 million in 1961, 0.3 per cent more than in 1960. Expenditures for electronics and communication equipment increased $36 million to $123.8 million, and those for the ships programme increased $14.8 million to just under $46 million. Expenditures on the aircraft programme, however, fell off by $44.3 million to a level of $222.5 million in 1961.

Contracts placed outside Canada in 1961 amounted to $26.1 million, or 4.9 per cent of the total net value of prime contracts issued. This compares with $85.3 million, representing 10.6 per cent of the total in 1960, when large contracts associated with the CF-104 programme were placed abroad. The United States received 3.2 per cent of the total contracts placed in 1961, Britain received 0.9 per cent and other countries 0.8 per cent. The value of payments made directly to prime defence contractors outside Canada was $65.3 million, 10.5 per cent of total payments on defence procurement and construction in 1961. Contractors in the United States received 8.3 per cent of total payments, those in Britain received 1.5 per cent, and those in other countries 0.7 per cent. In the previous year, direct payments to prime contractors outside Canada amounted to $70.3 million, or 11.3 per cent of the total.

The United States received Canadian prime defence contracts valued at $16.7 million in 1961. This was a substantial decrease from the $70.4 million recorded in 1960. The major new commitments in the United States were for helicopters, navigation beacons, anti-submarine data processing equipment, and increases in contracts for the CF-104 programme. Payments to prime contractors in the United States amounted to $51.8 million in 1961, as against $58.7 million in the previous year.

Contracts placed in Britain were valued at $5.0 million in 1961, down from $11.7 million in 1960. The major new defence commitments in Britain were for ammunition components and 105mm shells. Payments to British prime contractors amounted to $9.1 million in 1961, an increase of 5.8 per cent over 1960.

Contracting against DDP Votes and the Revolving Fund—During 1961, the Department placed $16.0 million in contracts against certain Defence Production Votes that can be described as assisting Canadian defence industry. This was three and one-half times the value in 1960, when such contracts amounted to $4.5 million. The major area of assistance in 1961, which involved contracts totalling $13.8 million, was to sustain research and development capability in Canadian industry related to the needs of the Canada-United States development and production sharing programme. More details of this and other areas of departmental assistance to Canadian defence industry are contained in the Industry and Defence and the Defence Production and Development Sharing

sections of the Report. Expenditures on these areas of assistance to industry amounted to $7.5 million in 1961, compared with $5.0 million in the preceding year.

Revolving Fund contracts amounted to $40.6 million in 1961, primarily to finance the production of five "swing-tail" CC-106 aircraft and to make funds available for initial production in connection with the Canada-United States F-104G mutual aid programme. Revolving Fund contracts amounted to $1.3 million in 1960.

Contracting for all other sources—Contracts placed for all sources other than the Departments of National Defence and Defence Production totalled $116.0 million in 1961, an increase of 12.8 per cent over the $102.8 million in 1960. Of the amount recorded for 1961, $97.5 million was placed for the United States Government, representing a 29.3 per cent increase over the previous year's total of $75.4 million. The major new contracts or increasing commitments by the United States in 1961 were for aircraft engine spares, Caribou aircraft, 7.62mm cartridges, plotting tables, field magneto telephones, doppler navigation equipment, division components for area type communication system, installation of underwater cable system, depot level maintenance of certain Pinetree radar stations, transportation services for DEW Line re-supply, aircraft fuel and other petroleum products, nitroguanidine, full tracked carriers and development of a small gas turbine engine. Payments by the United States Government against these contracts amounted to $92.2 million during 1961, an increase of 7.8 per cent over the value of $85.5 million in 1960.

Contracts placed by the Department for the British Government totalled $2.1 million in 1961, of which the largest amount was for the purchase of variable depth sonar. Contracts issued for other foreign governments amounted to just over $1 million.

Contracting for other Canadian Government departments and agencies totalled $15.4 million in 1961. Colombo Plan requirements accounted for $9.9 million of this. A large increasing commitment was made in connection with the construction of a hydrographic and oceanographic survey vessel for the Department of Mines and Technical Surveys.

Defence Production and Development Sharing

CONTINUED stimulation by both Canadian and United States Governments during 1961 resulted in a 25 per cent increase, to a total of $142.6 million, in the value of United States defence production and development sharing prime contracts and subcontracts received in Canada. The steady growth of United States defence sharing business in Canada during the past three years indicates that this programme has become an important part of Canada-United States joint defence and defence production arrangements.

Regular monitoring and direction of the programme was provided by a Committee of senior officials of both governments. This Committee included representatives from the Canadian Departments of Defence Production, National Defence, External Affairs and Finance, as well as from the United States Departments of Defense, Army, Navy and Air Force.

Co-ordination of development sharing projects supported by the Department's development fund was provided by an Inter-departmental Committee made up of representatives from the Departments of Defence Production and National Defence and Treasury Board staff.

The Department's Production Sharing Co-ordinating Office maintained close liaison with other Canadian Government departments and with appropriate authorities in the United States. The production branches of the Department began to introduce a greater amount of production sharing work into regular line operations with a view to improving liaison with industry. Liaison officers stationed at major United States centres and the Department's Washingon Office were also actively concerned with the programme. Close liaison was continued with the Department of Trade and Commerce to ensure that opportunities provided by trade commissioners and trade shows in the United States were exploited.

During the year a continuing effort was made to refine procedural arrangements, such as those involved in United States duty regulations, security matters, and obtaining specifications. The Buy America Act was further liberalized in relation to Canadian supplies, and the source listing of Canadian firms with United States agencies was closely reviewed.

The provision of information on the programme to prime contractors and subcontractors, as well as to government procurement officers, was emphasized by both governments. A new edition of the Canadian Commodities Index, listing over 500 Canadian companies actively interested in defence production sharing, was issued during the year primarily for use within the United States. A steady demand continued for the handbook, "Canada-United States Defence Production Sharing",

issued in 1960, over 15,000 copies of which had been distributed to the end of 1961. Similar publications concerned with research and development were being prepared for distribution in 1962.

The United States Services issued further directives and instructions throughout the Services which placed Canadian industry on more equal terms with United States industry in defence contracting and subcontracting.

Working groups designed to provide closer liaison between this Department and the United States Air Force were established during the year, and the United States Navy named specific officers to act as contact points on production sharing in appropriate Bureaux. These arrangements are expected to prove beneficial in facilitating the early participation of Canadian industry in United States defence development and production requirements.

In some special cases where American contractors have been able to write off their preproduction and tooling costs under previous contracts, the Department provided financial assistance to Canadian firms bidding on United States contracts by absorbing part of their preproduction and tooling costs. Payments amounting to $678,000 were made to Canadian firms in 1961 for this type of assistance. New contractual commitments totalled $1,370,000, of which the larger amounts involved assistance for counter-mortar radar, 7.62mm cartridges, an electronic counter countermeasure device and circuit boards.

Assistance was also given to Canadian industry towards research and development projects of interest to the United States Services. Contracts amounting to $13,844,000 were made in 1961 for this type of assistance, with expenditures totalling $4,636,000. The major new commitments were in connection with the Caribou Mk.2 aircraft, the PT-6 turboshaft and turboprop engines, a 600 HP gas turbine engine, airborne doppler radar and the CL-91 high mobility light utility carrier.

All of these efforts resulted in significant increases in bid solicitation and submissions in the prime contract area. Solicitations rose from 2,693 in 1960 to 5,786 in 1961, and submissions rose from 957 to 1,799. Contracts placed by the United States Government with Canadian Commercial Corporation rose from 446 to 830 and were valued at $70.4 million. In the subcontract area, solicitations fell from 2,719 in 1960 to 2,524 in 1961, and responses fell from 2,120 to 1,986. Subcontracts received by Canadian firms, however, rose from 882 to 1,111, valued at $69.1 million. Other prime contracts received directly from the United States Government by industry and universities in Canada totalled $3.1 million.

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Canadian Co-operation in NATO on Research, Development and Production

THE Department continued to co-ordinate Canada's activities in connection with the research, development and production programme of the North Atlantic Treaty Organization. This programme endeavours to attain maximum efficiency in standardization and production of military requirements by member countries. The Department provided the Canadian representative on the NATO Armaments Committee, which administers the programme to achieve this aim.

Some projects, such as those involving aircraft, have made fairly rapid progress. The Canadian aircraft industry, along with those from other member countries, have submitted feasibility and design studies for medium range transport and strike reconnaissance aircraft in the vertical and short take-off and landing (V/STOL) class, from which those for common production and use by NATO countries will be selected.

Close liaison was maintained between this Department and the Department of National Defence and other Government agencies concerned with this programme. Canada has submitted for consideration by the NATO groups a number of projects in the fields of V/STOL aircraft, mobile radar, vehicle navigation equipment, sonar equipment, personnel carriers, anti-tank weapons, anti-personnel land mines, air-borne navigation aids, aircraft engines, and telephone terminal equipment.

This Department, the Department of National Defence and the National Research Council provided representation at meetings to review most of the projects and provided necessary information on the Canadian proposals. In addition, representation was provided at meetings of existing groups of experts by various Government agencies.

Defence Exports to Overseas Countries

Arising out of the increased activities within NATO, several countries have expressed directly their interest in Canadian defence equipment. Canadian industry was encouraged to participate in supplying the defence needs of European and other countries in such areas as aircraft, navigation aids and engine spares. To assist in this activity, an officer of the Department was posted to the Canadian Embassy in Paris.

Arrangements were made so that Canadian industry could obtain assistance from the Department in seeking opportunities to develop and produce defence equipments for other countries.

During 1961, Canadian firms reported that they had received $42.0 million worth of prime contracts and subcontracts from NATO and other countries

(excluding the United States). Prime contracts accounted for $24.9 million, of which the major items were Otter and Caribou aircraft for Ghana, flight simulators for a number of NATO countries that have adopted the F-104G aircraft, and engine spares and power flight controls for the Federal Republic of Germany. Subcontracts placed in Canada by overseas countries amounted to $17.1 million, the largest being for position and homing indicators for the Federal Republic of Germany.

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Industry and Defence

Goods and services provided by contractors in Canada for the Canadian defence preparedness programme represented one and one-half per cent of this country's gross national product in 1961. This was approximately the same proportion as in the preceding year. Although the amount of goods and services provided, as measured by defence procurement and construction payments to Canadian contractors, increased by a small amount in 1961, its proportion to gross national product remained stable because of the further overall growth in the Canadian economy during the year.

Defence requirements represent an important source of activity for only a few industries in Canada. The aircraft industry is the largest of the Canadian industries primarily dependent on defence business. Production and employment in this industry were slightly higher in 1961 than in the preceding year. Employment in the shipbuilding industry was higher in the latter half of the year than in the same half of 1960. Increased shipyard activity on the six destroyer escorts contributed to this strengthening in the shipbuilding industry. Greater production of defence electronic equipment accounted for some of the steady rise in activity and employment in the electronics industry during the year. The armament industry felt the effect of decreased military requirements, and the Department endeavoured to place its contracts for armament equipment so as to sustain economic operations in key plants. Defence construction activity was up slightly over the preceding year.

The Department remained active in maintaining an adequate defence production base in Canada. An important factor in this area was the defence production and development sharing programme, with its emphasis on providing a greater degree of joint utilization of the defence production capabilities in Canada and the need for Canadian industry to maintain a high standard of engineering and technical competence for development purposes. Added to this was an increased emphasis on selling Canadian-produced military items to other countries. The assistance given to Canadian industry and the success achieved through these endeavours in 1961 are covered in other sections of this Report.

The Department increased its programme of establishing sources in Canada for component parts and materials essential to the production of modern military equipment. The object of this is to establish qualified sources of supply sufficiently in advance of requests from the Department of National Defence in order to ensure the maximum participation of Canadian firms in defence procurement, particularly in the electronics field. Because of the urgent nature of many military requirements, this advance qualification will make Canadian producers less dependent on foreign sources of supply. A further aim is to prove the capability of

producing a requirement at a competitive price as well as to required performance standards, thus enabling Canadian sources to meet both United States and Canadian demand. Almost $500,000 was spent on this programme in 1961, and new commitments amounting to $360,000 were made to establish qualified sources for the production of diffused silicon mesa transistors, metal-oxide-film resistors, thermionic switch tubes and microwave components, and to provide a hydrophone test facility.

A defence industrial applied research programme was established in 1961 to promote and strengthen the research capability of Canadian defence industry. Responsibility for the management of this new programme was assigned to the Defence Research Board. The Department of Defence Production is responsible for contracting under the programme and is directly interested in the selection of contractors and the establishment of appropriate contractual terms and conditions. The Department has co-operated with the Defence Research Board in selecting research objectives for this programme, and has advanced a number of proposals for consideration.

The Department continued to encourage private industry to invest in the capital equipment required for defence production, so that defence production capacity would be tied in directly with the general structure of Canadian industry. In a few cases, however, direct Government investment and financial incentives were necessary to ensure the capacity essential to defence requirements.

Government financed capital assistance to private industry involved the expenditure of $915,000 in 1961, most of which was for the extension of a runway at the Cartierville, Que., airport and for assets required in the production of dosimeters and electronic equipment components. New approvals of capital assistance projects, amounting to $206,000, involved assets for the production of electronic components and 155mm shot, and to equip a Central Electronics Components Inspection Laboratory. This Laboratory, located with Inspection Services of the Department of National Defence, is to provide certain defence manufacturers with a facility where they can have component parts tested at a nominal cost until they can establish their own testing capabilities. Title to all capital assistance assets remains with the Crown, and the contractor responsible for their use is held accountable for their proper maintenance.

Additional capital cost allowance for income tax purposes (accelerated depreciation) was granted to some contractors on their capital investment in defence production or production supporting assets. Interim certificates for accelerated depreciation were granted on an estimated $1.6 million worth of capital assets in 1961. These assets were mainly required for the production of the CF-104 aircraft and for the production of airframe and aircraft engine components.

Rentals were paid by the custodian contractors where Crown owned assets were used for non-defence work. This enabled defence production equipment to be further integrated into the civilian sector of the Canadian economy. In all cases, the interest of the Crown in the future use of these assets for defence production purposes was protected and the rentals charged were such as to ensure a fair return to the Crown on the assets concerned.

Where it was not possible to keep necessary production facilities operating for either defence or civilian requirements, certain Crown assets were maintained to meet possible future requirements. In 1961, $807,000 was spent on the care, maintenance and custody of such standby Crown owned defence production facilities and equipment.

Materials Supply

While the supply of Canadian prime metals and semi-fabricated materials was sufficient to meet Canadian defence, atomic energy and production sharing programmes, departmental assistance was constantly required to obtain satisfactory deliveries of components to keep programmes on schedule. The supply of certain other types of metallic and non-metallic materials being used in Canada's defence and related programmes was dependent on allocations under the United States Defense Materials System. New production from the expansion of existing plant facilities and the construction of new mills in the Canadian prime metal and basic materials fields continued to decrease this country's dependence on foreign sources for these materials.

Increasing demands to meet Canadian defence and atomic energy requirements for helium again depended upon supply from the United States. New gas fields in the Middle East that have recently been brought into production indicate a new source of supply to meet the demands of continental Europe.

Production of primary aluminum was reduced during the year due to decreased domestic and foreign demand. Canadian facilities producing mill forms, however, were kept at near capacity and departmental intervention was required to expedite urgent defence requirements. Lack of demand for forgings resulted in the closing down of a major proportion of a forging plant at Kingston, Ont. Production of primary copper and its many mill forms was adequate to meet world demand and no undue difficulties were encountered to meet defence requirements. The sole producer of magnesium in Canada increased its production capacity by 25 per cent during the year.

In view of information released by the International Tin Council that tin would be in short supply during the year, sales of tin were made from the Department's stockpile, which assisted in maintaining a continuing supply to Canadian consumers. The sales were handled for the Department by a private broker. Sales

were made at going market prices and at a rate that would not disrupt the normal market. This disposal action was taken with the approval of the major producing and consuming countries and on the understanding that sales would be made in a manner that would cause the least disruption to the economies of the producing countries.

An increasing number of Canadian defence and atomic energy contractors have found it advisable to take full advantage of United States priorities, allocations and special assistance provided to Canadian contractors under the United States Defense Production Act. They have, in general, obtained very satisfactory results even when competing for conventional type war support items against an accelerated United States defence programme.

Canada's major defence programmes were again included in the United States Master Urgency List, thus ensuring an equitable supply of strategic and critical materials to meet production schedules.

Emergency Supply Planning

DURING 1961, the Emergency Supply Planning Branch made significant progress with the preparations necessary to bring a War Supplies Agency into effective existence immediately on the outbreak of nuclear war, should one occur. This Agency would assume full control over all aspects of the production, distribution and pricing of supplies for both civil and military purposes, except certain aspects of the agricultural and fishing industries.

An interim organizational structure for the War Supplies Agency, designed to meet anticipated supply requirements during the first few weeks after nuclear attack, was developed and approved. Within the overall organization of the War Supplies Agency, there are national, regional, zonal and local components in conformity with the system of emergency government being developed by the Emergency Measures Organization. The staffing of the national component of the War Supplies Agency was completed by the selection, on a standby basis, of suitably qualified persons from various Government departments and agencies in Ottawa. The staffing of the ten regional components, also on a standby basis, neared completion, and arrangements were underway with the various provincial governments to draw on their personnel resources for this purpose, as well as on business and industry and the field staffs of various federal departments and agencies. A beginning was made on the organization of shadow zonal and local components of the War Supplies Agency.

To provide a basis on which the War Supplies Agency could make a post-attack assessment of surviving supply resources, the Emergency Supply Planning Branch initiated a research programme designed to produce in readily useable form comprehensive inventory data on major stocks of essential commodities and related production facilities normally available in this country. This long-term research programme has achieved some substantial results with respect to the collection and processing of data on stocks of food and petroleum products. Also, methods have been developed in co-operation with the Canadian Army and the Emergency Measures Organization for evaluating surviving resources after attack.

Various regulations and orders likely to be required by the War Supplies Agency in exercising effective control of supplies under conditions of nuclear war have been prepared in draft form. Considerable work was done on the development of an industrial preparedness programme.

The national and regional components of the War Supplies Agency took part in both of the TOCSIN exercises held during the year. In addition, a three-day conference of senior federal and provincial government officials occupying key

positions in each of the regional components of the War Supplies Agency was held early in December.

At the end of the year, the Branch had a regional officer in each province except Prince Edward Island and Newfoundland. A competition was in progress for the selection of a regional officer in Newfoundland.

Organization and Administration

THE basic organization of the Department remained unchanged during 1961. Personnel on strength increased from 1,513 at the end of 1960 to 1,538 at the end of 1961. Of the latter number, 1,212 were located in Ottawa, 238 were employed in offices elsewhere in Canada, and 88 were employed outside the country. Recruitment of field staff for the Emergency Supply Planning Branch accounted for most of the increase in staff during 1961. An increase also occurred in the staff of the Armament Branch, which was successful in obtaining qualified technical personnel.

Seventy-seven competitions were held to fill positions in the Department. There were 173 new appointments, 148 terminations, and 157 inter-branch transfers during the year.

An organization chart of the Department as at December 31, 1961, appears as Appendix A to this Report. The senior personnel at that date are listed in Appendix B, and the distribution of staff by units of the Department is shown in Appendix C.

Five Crown Corporations, whose work is closely allied with that of the Department, reported to Parliament through the Minister of Defence Production. A list of these companies and their principal officers is given in Appendix D. An account of the activities of these Crown agencies is contained in their respective Annual Reports.

Production and Purchasing Branches in Canada

The procurement of defence supplies requiring specialized production facilities remained the function of five production branches: Aircraft, Armament, Electronics, Machine Tool, and Shipbuilding. The General Purchasing Branch continued to be responsible for the supplies and services not normally requiring special production facilities. District purchasing offices in fourteen cities across Canada procured the supplies and services of a local or urgent nature required by defence establishments in the vicinity of the offices. The activities of these production and purchasing branches, including the district purchasing offices, are covered in the Production and Procurement section of this Report. A list of the district purchasing offices in Canada is contained in Appendix E.

Offices Located Outside Canada

The London (England) Office conducted all procurement activity of the Department in Britain and directed the activities of two sub-offices which handled procurement in continental Europe, and a small sub-office at Prestwick Airport, Scotland, to expedite the repair and overhaul of aircraft and equipment for the

Royal Canadian Air Force in Europe. The London Office procured from British Government agencies, such as Admiralty, Ministry of Aviation and the War Office, as well as being responsible for all the Department's commercial procurement in Britain. Procurement in France, chiefly through the Government of France, was carried out by the sub-office in Paris; and procurement in the Federal Republic of Germany, chiefly through the Government of that country, was handled by the sub-office in Koblenz.

The Washington Office continued to handle procurement from the United States Armed Services and, in some exceptional cases, from commercial firms in the United States. Practically all procurement from United States commercial sources was made directly by the appropriate production or purchasing branch in Ottawa. The Washington Office also maintained regular liaison with many United States Government agencies, handled Canadian participation in the United States priorities and expediting systems, and supplied a wide range of information to Canadian Government officials. This Office spent much time on the Department's production and development sharing activities, which are covered elsewhere in this Report. In this connection, it handled a large number of inquiries and arranged numerous meetings involving Canadian and United States Government officials, contractors and subcontractors. The Washington Office directed the activity of a sub-office at Wright-Patterson Air Force Base, Ohio, involving operations with the Air Materiel Command of the United States Air Force.

Production sharing liaison offices were located in New York City and Rome, N.Y., Bedford (near Boston), Mass., Philadelphia, Pa., Detroit, Mich., and Los Angeles, Calif.

The Department continued to be represented on the Canadian Delegation to the North Atlantic Council in Paris, France. The Department's representatives were responsible for liaison with other national delegations and with the NATO international staff, and for making the Canadian viewpoint known on defence production matters of common concern to several members of the Alliance. They represented Canada on the NATO Armaments Committee which, in turn, controls a wide variety of expert working groups; and during the first half of the year they performed a number of duties in committees of the NATO Council engaged in emergency supply planning.

An office was maintained in Bonn, Federal Republic of Germany, for the Canadian representative to the European Organization for Direction and Control of the F-104G programme. An officer of the Department was posted to the Canadian Embassy in Paris to assist Canadian industry to participate in European defence requirements.

The addresses of the Department's offices outside Canada are also shown in Appendix E.

Advisory and Service Branches

The Administration Branch was responsible for the Department's personnel and welfare services, organizational planning and systems improvement, training and development, office accommodation and equipment, central typing services, and all ancillary services connected with personnel administration.

Various methods improvement programmes were undertaken during the year, including a comprehensive organization and methods survey conducted by the Civil Service Commission of the typing and stenographic support units in all branches. Several types of integrated clerical support units adapted to the specific needs of individual purchasing branches were introduced. A complete records conversion programme was initiated in the Industrial Security Branch.

The Training and Development Division conducted specialized courses in management accounting, contract administration, industrial engineering, personnel management, critical path scheduling, conference and group leadership, as well as general courses in letter and report writing and orientation courses for various staff levels. Arrangements were made for members of the Department to participate in the United States Air Force School of Logistics, American Management Association seminars, and courses conducted by the Civil Service Commission. These courses were fundamental to the integrated personnel management programme in the Department.

The Personnel Division handled recruiting, placement, transfer, promotion, superannuation, pay, attendance and personnel counselling for the Department. Personnel records were put on a punched card machine system. An appraisal board programme for technical procurement officers was further developed and implemented during the year.

The intern procurement officer training programme entered its fourth year with the hiring of six graduate engineers. The first two classes in this programme, consisting of eight engineers, have moved into operating positions in the production branches and are carrying out full project officer responsibilities. Three officers were also engaged under the junior administrative officer programme.

The Comptroller's Branch provided the accounting service for the Department and for Canadian Commercial Corporation, a Crown company associated with the Department. Services on behalf of the Corporation included special financial and accounting administration as required. Complete bookkeeping records, based as far as possible on commercial practice, were kept of the transactions against the Department's Parliamentary appropriations and of all assets and liabilities for which responsibility lies with the Minister of Defence Production. These assets include Crown owned buildings and equipment in custody of private contractors or in warehouses. Their accounting involved physical identification in the field and

the maintenance of a full inventory record by description, quantity and value. Test physical counts of materials carried in stock at various locations were also made during the year.

Records were maintained of the transactions arising out of various uncleared accounts taken over from predecessor departments, and with respect to disbursements and deliveries on NATO account which were covered by funds transferred to this Department by the Department of National Defence. The Branch carried out the financial administration of all agreements involving the sale to contractors of Crown owned land, buildings and equipment. In addition, the Branch continued to provide the financial administration of the Defence Production Revolving Fund.

The Branch also maintained records of Department of National Defence equipment on loan to contractors through the Department of Defence Production, and contributed to the recording and administration work connected with the rental of Crown assets to contractors.

With respect to the Department, the Branch continued to submit to the Deputy Minister monthly statements of assets and liabilities, revenue and expenses, and reports thereon. Detailed expense statements were also issued each month to other senior officers of the Department. Similar statements and reports, on a quarterly basis, were submitted to the directors and responsible officers of Canadian Commercial Corporation. The Comptroller or his representatives attended various meetings with the Corporation directors and others during the year as required.

The financial position of the Department as at March 31, 1961, is shown in the Balance Sheet and related schedules given in Appendix G, duly certified and reported upon by the Auditor General.

The Economics and Statistics Branch provided the general economic and statistical services required by the Department. It undertook studies in these areas that would provide the Department with information on the effects of the defence procurement programme on various facets of the Canadian economy.

The large number of procurement requisitions received by the Department, contracts placed on behalf of the Department of National Defence and other requisitioning agencies, and payments made against these contracts were recorded and tabulated through the use of data processing equipment. Approximately 160,000 documents were processed and a further 300,000 pre-punched cards were tabulated in order to obtain the basic data for analyzing the Department's procurement activities and the defence procurement and production programme. Regular statistical reports on the Department's contracting activities and on expenditures related to this contracting were issued.

Certain departmental personnel records were maintained on punched cards and processed mechanically. The application of data processing techniques to delivery records of the Washington Office was developed and implemented.

Statistical reports measuring the progress of the Canada-United States defence production and development sharing programme were prepared regularly during the year. These reports involved periodic surveys of major defence contractors. A procedure was developed for obtaining information on all foreign content in defence contracts.

Projections of defence procurement expenditures were made to provide the Department with an estimate of future procurement activity and to assist the Department of National Defence in the preparation of its budgetary estimates. This required the co-ordination and analysis of expenditure data from major defence contractors and close liaison with production officers.

The Branch maintained liaison with other economic research and statistical units, both in and outside the Government Service, in order to obtain information necessary for economic appraisals of the defence programme, and to provide them with data on the defence sector of the Canadian economy. Various firms and organizations were supplied with material relating to the Department's procurement activities.

Lists of unclassified defence contracts valued at $10,000 and over awarded by the Department to firms in Canada were compiled and issued semi-monthly in the form of a press release.

The Financial Adviser's Branch acted in an advisory capacity with respect to the development and application of financial policies related to defence contracts.

All contract proposals involving commitments in excess of $10,000 were reviewed to ensure that the principal terms conform to departmental policies and that the procurement proposed properly reflects the requirements of the requisitioning agency. Special consideration was given to contract proposals for large commitments and to cases involving profit incentives. Submissions to Treasury Board were prepared and liaison with Treasury Board staff was maintained.

The Branch reviewed reports prepared by the Audit Services Division of the Comptroller of the Treasury following the audit of contracts, and co-operated with that Division and the procurement branches of the Department to resolve cost and profit problems with contractors arising from such audits.

Studies undertaken during the year included limitations on profit incentives in target contracts, overhead content in negotiated firm price contracts, use of hourly rate contracts, cost control for research and development contracts, and allowable rates for out-of-plant technical services. The Branch also participated in a review of the liability insurance requirements for shipbuilding repair and overhaul contracts and the warranty provisions used in departmental contracts. The Branch furnished information regarding contractor liability for sales tax, customs duty and excise taxes, and provided advisory services with respect to problems arising from con-

tractual negotiations. Consideration was also given to the financial features of all formal agreements, including defence production sharing agreements.

Applications from defence contractors for capital assistance or additional capital cost allowance (accelerated depreciation) were reviewed in the light of departmental policy. Declarations being made to Crown Assets Disposal Corporation covering surplus capital assistance assets, tooling, and production material were screened for approval. Rentals were assessed in cases where contractors made commercial use of the Crown owned assets. Where contracts were cancelled or terminated because of revised requirements, negotiations were conducted with the contractors concerned to achieve a satisfactory settlement.

The Branch co-ordinated the preparation of the Department's estimates requirements, including the appropriations required by Crown companies responsible to Parliament through the Minister of Defence Production. The annual capital and operating budget submissions required from these companies under The Financial Administration Act were reviewed, as were their interim financial statements. The Branch also administered grants made in lieu of taxes to municipalities in which Crown owned defence plants operated by private contractors are situated.

The Legal Branch advised on legal implications of the policies and procedures of the Department and the legal steps required to protect the Department in its transactions. In so doing, the Branch provided general legal services to the Department, especially to the production branches and the General Purchasing Branch. The largest portion of the day-to-day work concerned contract law, and included advice regarding the terms of contracts and the preparation of formal agreements between the Department and private contractors.

Of special importance was the legal work required by the large purchase in Canada of F-104G aircraft by the Government of the United States for mutual aid to NATO countries, part of the cost of which is borne by Canada. Legal work was commenced on the production contracts resulting from this new programme and on the several licensing and royalty agreements which have to be negotiated with corporations in Canada and the United States for associated technical data.

In connection with the increasing number of contracts between the Department and Canadian industry covering financial assistance by the Crown in the establishment of productive capacity and in defence development programmes, legal advice was provided regarding the terms and conditions under which such assistance was given and individual contracts were prepared.

Some of the Department's submissions to the Governor in Council and Treasury Board were prepared by the Legal Branch. Also, the Branch co-operated with the Department of Justice in regard to litigation resulting from claims by or against the Department.

One of the principal continuing services provided by the Branch was the drafting of contracts between the Crown and contractors in Canada, following negotiation of the contract terms by officers of the Department, for the production of various defence supplies for the Canadian Armed Services and for the United States military departments. In many cases solicitors of the Branch advised the purchasing, production and technical officers of the Department during their negotiations with representatives of industry. It was often necessary for the solicitors to confer with lawyers representing industry in settling the legal content of the contracts.

The Branch gave legal opinions on the interpretation of contracts and statutes, termination of contracts, claims by and against the Crown, and on such diverse matters as assignments of contracts, title, risk, insurance, subcontracting, bankruptcy, patents, inventions, royalties, taxes, customs duties and land matters.

The Legal Branch handled all legal work of Canadian Commercial Corporation, a Crown company which reports to Parliament through the Minister of Defence Production.

The Secretary's Branch administered the Department's Communications, Printing and Stationery, Central Registry, and Service Divisions. The Secretary, as the Department's official signing officer, endorsed formal contracts with suppliers and conducted departmental correspondence. The Secretary also acted as co-ordinator for the activities of the Royal Commission on Government Organization within the Department.

The Secretary's Branch supplied several continuing departmental committees with secretarial services, and officers of the Branch represented the Department on various inter-departmental committees.

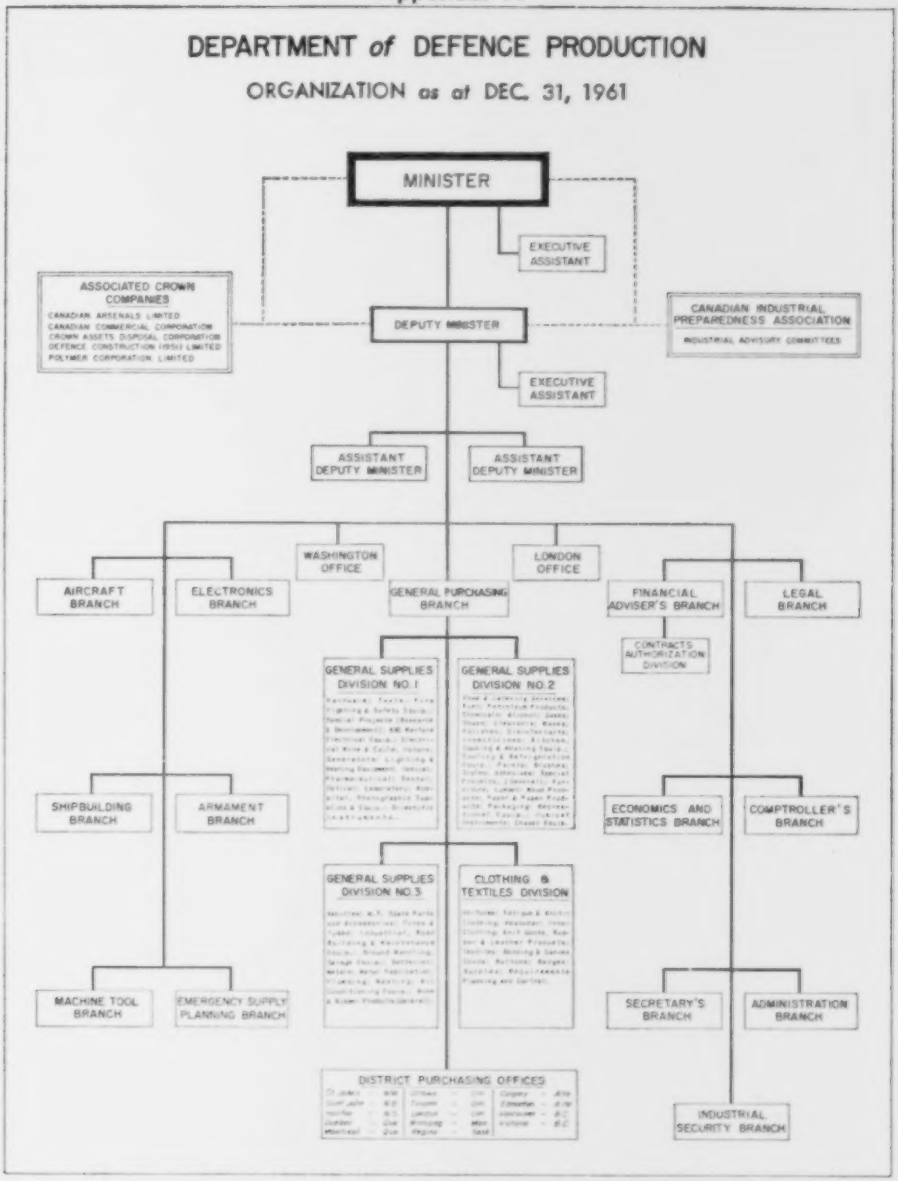
The Communications Division maintained a teletype service between Ottawa and the Department's offices in Montreal, Toronto and Washington. This service was available to other Government agencies on a pro rata basis and was extensively used by them. A teletype link was also maintained by the Department's Head Office and the Department of National Defence units throughout Canada. The "Telex" system, providing direct exchange of messages with other subscribers, was extended by the addition of new subscribers in Canada and the United States. Approximately 125,000 telegraphic and teletype messages were cleared by the Division during the year under review.

The Service Division provided the procurement branches with lists of firms capable of producing required items; reproduced invitations to tender, contracts and amendments to contracts; distributed copies of these documents to appropriate recipients; received, guarded and opened all tenders received at Head Office; and was responsible for replying to inquiries regarding the award of contracts.

The Printing and Stationery Division purchased the stationery and other office supplies required by the Department, supervised forms control and served as a liaison between this Department and the Department of Public Printing and Stationery in the procurement of all necessary printed material. The Division also co-operated in the production of several publications required in connection with the Canada-United States defence production and development sharing programme.

The Central Registry was responsible for the creation, movement and protection of the approximately 175,000 files required in the Department's operations. It also operated the Department's mail room and its internal distribution and messenger service.

Appendix A


DEPARTMENT of DEFENCE PRODUCTION
ORGANIZATION as at DEC. 31, 1961
MINISTER
EXECUTIVE ASSISTANT
ASSOCIATED CROWN COMPANIES
CANADIAN ARSENALS LIMITED
CANADIAN COMMERCIAL CORPORATION
CROWN ASSETS DISPOSAL CORPORATION
DEFENCE CONSTRUCTION (1951) LIMITED
POLYMER CORPORATION LIMITED
DEPUTY MINISTER
CANADIAN INDUSTRIAL PREPAREDNESS ASSOCIATION
INDUSTRIAL ADVISORY COMMITTEES
EXECUTIVE ASSISTANT
ASSISTANT DEPUTY MINISTER
ASSISTANT DEPUTY MINISTER
WASHINGTON OFFICE
LONDON OFFICE
AIRCRAFT BRANCH
ELECTRONICS BRANCH
GENERAL PURCHASING BRANCH
FINANCIAL ADVISER'S BRANCH
LEGAL BRANCH
CONTRACTS AUTHORIZATION DIVISION
GENERAL SUPPLIES DIVISION NO. 1
GENERAL SUPPLIES DIVISION NO. 2
SHIPBUILDING BRANCH
ARMAMENT BRANCH
ECONOMICS AND STATISTICS BRANCH
COMPTROLLER'S BRANCH
GENERAL SUPPLIES DIVISION NO. 3
CLOTHING & TEXTILES DIVISION
MACHINE TOOL BRANCH
EMERGENCY SUPPLY PLANNING BRANCH
SECRETARY'S BRANCH
ADMINISTRATION BRANCH
DISTRICT PURCHASING OFFICES
INDUSTRIAL SECURITY BRANCH

Appendix B

Senior Personnel of the Department

as at December 31, 1961

Minister

The Honourable Raymond O'Hurley, P.C., M.P.

Executive Assistant to the Minister	A. Trudel

Deputy Minister

D. A. Golden

Assistant Deputy Minister	G. W. Hunter
Assistant Deputy Minister	W. H. Huck
A/Executive Assistant to the Deputy Minister	W. J. Mulock

Production Branches

Director, Aircraft Branch	D. L. Thompson
Deputy Director, Aircraft Branch	A. D. Belyea
Director, Armament Branch	C. L. Muir
Director, Electronics Branch	D. B. Mundy
Deputy Director, Electronics Branch	S. I. Comach
Deputy Director, Electronics Branch	T. C. Jones
Director, Machine Tool Branch	R. Mosher
Director, Shipbuilding Branch	J. C. Rutledge

General Purchasing Branch

Director	D. M. Erskine
Deputy Director	R. C. D. Laughton

Emergency Supply Planning Branch

Director	J. C. Morrison

Advisory and Service Branches

Financial Adviser	R. M. Keith
Deputy Financial Adviser	N. R. MacLean
Director, Contracts Authorization Division	J. D. C. Mahaffy
Comptroller	G. F. Wevill
Deputy Comptroller	T. E. Brown
Departmental Secretary	J. J. Tevlin
Director, Administration Branch	H. R. Kotlarksy
Director, Economics and Statistics Branch	W. J. W. V. Johnston
Director, Industrial Security Branch	L. C. Cragg
Director, Legal Branch	F. F. Waddell
Deputy Director, Legal Branch	C. S. Stevenson
Director, London (England) Office	R. D. Roe
Director, Washington Office	J. A. Teeter

Appendix C

Distribution of Departmental Staff

as at December 31, 1961

	Number of Employees
Minister's Office	13
Deputy Minister's Office	31
Aircraft Branch	161
Armament Branch	65
Electronics Branch	186
Machine Tool Branch	26
Shipbuilding Branch	103
General Purchasing Branch—	
Head Office	180
District Purchasing Offices	169
Emergency Supply Planning Branch	34
Administration Branch	88
Comptroller's Branch	85
Economics and Statistics Branch	37
Financial Adviser's Branch	55
Legal Branch	11
Secretary's Branch	185
Industrial Security Branch	31
Offices in the United States and Europe, and NATO Delegation, Paris	78
Total	1,538

Appendix D

Crown Companies Associated with the Department of Defence Production

as at December 31, 1961

Canadian Arsenals Limited

Vice-President	N. P. Petersen
General Manager	J. H. Berry
Secretary-Treasurer	D. C. Cullen

Canadian Commercial Corporation

President	M. H. Lamoureux
Secretary and Legal Adviser	F. F. Waddell
Comptroller	G. F. Wevill

Crown Assets Disposal Corporation

President and General Manager	Louis Richard
Secretary and Legal Counsel	M. J. Ellsworth

Defence Construction (1951) Limited

President and General Manager	R. G. Johnson
Secretary	J. D. Jennison
Treasurer	N. Tokaryk

Polymer Corporation Limited

Chairman of the Board	E. J. Brunning
President and Managing Director	E. R. Rowzee
Vice-President, Operations	L. D. Dougan
Vice-President, Finance	S. Wilk
Vice-President, Marketing	Roger E. Hatch
Vice-President, Research and Development	Dr. E. J. Buckler
Secretary and Chief Legal Officer	W. J. Dyke

Appendix E

District Purchasing Offices and Offices Located Outside Canada

Addresses as at December 31, 1961

District Purchasing Offices

ST. JOHN'S, NFLD.[1]	Buckmaster's Field, Building No. 40 (P.O. Box 487)
HALIFAX, N.S.	Room 527, Federal Building, Bedford Row (P.O. Box 1655)
SAINT JOHN, N.B.	Room 408, Sadim Building, Canterbury & Duke Streets
QUEBEC, P.Q.	126 St. Peter Street, (P.O. Box 70—Station "B")
MONTREAL, P.Q.	685 Cathcart Street
OTTAWA, ONT.	953 Somerset Street West
TORONTO, ONT.	Mackenzie Building, 36 Adelaide Street East
LONDON, ONT.	388 Dundas Street
WINNIPEG, MAN.	Room 326 E, 344 Edmonton Street
REGINA, SASK.	302, New Post Office Building
CALGARY, ALTA.	Room 725, Public Building, 8th Avenue and 1st Street East
EDMONTON, ALTA.	906 Federal Public Building, 99th Ave. & 107th Street
VANCOUVER, B.C.	Room 407, Federal Building, 325 Granville Street
VICTORIA, B.C.	Room 308, Canada Customs House, 816 Government Street

Offices Located Outside Canada

WASHINGTON, U.S.A.	Canadian Department of Defence Production, 2450 Massachussetts Ave., (P.O. Box 4897, Cleveland Park Station) WASHINGTON 8, D.C., U.S.A.
Sub-Office	MCL DDP Wright-Patterson Air Force Base, OHIO, U.S.A.

[1] The address of the St. John's, Nfld., district purchasing office was changed in January, 1962, to:
Room 401, Main Post Office Building,
Water Street
(P.O. Box 487)

PRODUCTION SHARING LIAISON OFFICES	Canadian Department of Trade and Commerce, c/o Canadian Consulate General, 680 Fifth Ave., NEW YORK 19, N.Y., U.S.A.
	Canadian Department of Defence Production, ROP/DDP, Rome Air Materiel Area, Griffiss Air Force Base, ROME, N.Y., U.S.A.
	Canadian Department of Defence Production, (Boston), AMC/ESC/LEX, L. G. Hanscom Field, BEDFORD, Mass., U.S.A.
	Canadian Department of Defence Production, c/o U.S. Army Signal Supply Agency, 225 South 18th Street, PHILADELPHIA 3, Pa., U.S.A.
	Canadian Department of Defence Production, c/o U.S. Army Ordnance District, 1580 East Grand Blvd., DETROIT 11, Mich., U.S.A.
	Canadian Department of Defence Production, Los Angeles Procurement District, 1206 South Maple Avenue, (Room 546), LOS ANGELES 15, Calif., U.S.A.
LONDON, ENGLAND	Canadian Department of Defence Production, 1 Grosvenor Square, LONDON W. 1, England
Sub-Offices	Canadian Department of Defence Production, c/o Canadian Embassy, 35 avenue Montaigne, PARIS VIII^{e}, France
	Canadian Department of Defence Production, Ehemaliges Gerichtsgebaude, KOBLENZ-EHRENBREITSTEIN, Hofstrasse 272, Federal Republic of Germany
	Canadian Department of Defence Production, c/o Scottish Aviation Limited, PRESTWICK AIRPORT, Ayrshire, Scotland
OFFICE OF DDP REPRESENTATIVE TO THE NORTH ATLANTIC COUNCIL	OTAN-NATO, Place du Maréchal de Lattre de Tassigny, PARIS XVI^{e}, France

DEFENCE PRODUCTION ATTACHÉ	c/o Canadian Embassy, 35 avenue Montaigne, PARIS VIII^{e}, France
OFFICE OF CANADIAN REPRESENTATIVE TO THE EUROPEAN ORGANIZATION FOR DIRECTION AND CONTROL F-104G	c/o Canadian Embassy, Zitelmannstrasse 22, BONN, Federal Republic of Germany

Appendix F

Statistics of Defence Contracts and Expenditures

The statistical tables in this appendix illustrate, in terms of the net value of contracts placed and the value of expenditures, the magnitude of various sectors of the Canadian defence procurement and construction programme during the calendar years 1959, 1960 and 1961.

The tables are grouped in pairs, with the first "a" containing data on the net value of contracts placed and the second "b" containing the value of expenditures against these contracts and against similar contracts placed in earlier years.

Tables 1-a and 1-b to Tables 4-a and 4-b contain statistics related to defence contracting by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence. Payments against these contracts are made from funds appropriated by Parliament for the Department of National Defence.

Tables 5-a and 5-b relate to certain activities in support of Canadian defence industry that are paid for from Defence Production Parliamentary votes.

Tables 6-a and 6-b provide data relating to prime defence contracts placed in Canada by the United States Government through Canadian Government agencies such as Canadian Commercial Corporation. The Department of Defence Production places most of the contracts for Canadian Commercial Corporation.

The net value of contracts placed, as shown in these tables, includes the value of amendments which increased or decreased commitments under existing contracts, as well as the value of new contracts.

Some of the figures for 1959 and 1960 have been revised since they were published in the preceding issue of the Annual Report of the Department. Also, the totals at the bottom of the columns do not always equal the sum of the programme values shown because of rounding the figures to the nearest thousand dollars.

Definitions of the Defence Programmes

The general concept involved in this defence programme classification is that of relating all procurement, as far as possible, to a readily identifiable military end-item, such as an aircraft, a ship, an electronic device, a gun, a type of ammunition, an item of clothing, etc. Thus a particular programme includes, in addition to the end-item, those components or parts that become an integral part of the end-item, as well as associated services such as design and development, installation, maintenance, and repair and overhaul.

AIRCRAFT: This programme includes complete aircraft and items to be physically incorporated in complete aircraft, such as airframes, engines, propellers, navigational and flight instruments, electrical systems and their components. Government-furnished aircraft equipment and the repair and overhaul of aircraft are also included. Excluded are accessories such as armament and communication equipment, photographic equipment, training devices and ground equipment.

ARMAMENT: This programme includes weapons such as small arms, guns, howitzers, and rocket launchers and their components; light, medium, and heavy ammunition of all types, including mines, depth charges, rockets, and torpedoes; and explosives and certain defence chemicals. Electronic fire controls are not included.

ELECTRONICS AND COMMUNICATION EQUIPMENT: Electronics and communication equipment of all types are in this programme, including telephone, telegraph, radio and radar equipment. Underwater sound equipment and fire control equipment are also included. Development, maintenance, management and transportation services associated with the procurement of electronics and communication equipment are in this programme.

SHIPS: This programme includes escort vessels, minesweepers, aircraft carriers, and other floating equipment, and ship components such as hulls and superstructures, propulsion machinery, boilers, condensers, heating and electrical systems. Reconversion, refit and repair of ships are also included. Armament and electronic gear are excluded.

TANK-AUTOMOTIVE: Included in this programme are tanks and vehicles of both armoured and non-armoured types. Cars, trucks, and buses and their components, such as tires and tubes, are included. Excluded are armament and electronic equipment.

FUELS AND LUBRICANTS: This programme includes petroleum, gas, coal and coke, and their products, principally aviation turbine fuel and gasoline, motor vehicle gasoline, and heating fuels.

CLOTHING AND EQUIPAGE: All items of personal clothing, including footwear, and of personal equipment, such as mess kits and steel helmets, are in this programme.

CONSTRUCTION: This programme includes all construction contracts for building structures, runways, etc., as well as for consultant services, repairs and maintenance. Most of these contracts are placed by Defence Construction (1951) Limited.

Total Contracts Placed for DND and Related Expenditures

Table 1-a.—Net Value of Total Canadian Government Defence Contracts Placed by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1959	1960	1961
	$000	$000	$000
Aircraft	218,225	363,210	113,194
Armament	19,049	19,703	11,311
Electronics and communication equipment	82,300	133,617	122,593
Ships	25,989	84,657	26,585
Tank-automotive	7,893	6,947	10,981
Fuels and lubricants	57,768	50,496	48,972
Clothing and equipage	18,808	6,284	11,897
Construction	67,141	51,571	90,671
Other	94,383	87,800	92,569
Total	591,556	804,286	528,773

Table 1-b.—Value of Expenditures on Canadian Government Defence Contracts Placed by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1959	1960	1961
	$000	$000	$000
Aircraft	264,209	266,736	222,485
Armament	45,893	26,035	22,323
Electronics and communication equipment	99,986	87,894	123,838
Ships	35,056	31,203	45,978
Tank-automotive	7,574	8,572	8,411
Fuels and lubricants	40,444	39,007	38,048
Clothing and equipage	20,639	4,123	7,103
Construction	67,723	64,193	67,106
Other	91,918	92,830	87,242
Total	673,441	620,592	622,535

Contracts Placed for DND in Canada and Related Expenditures

Table 2-a.—Net Value of Canadian Government Defence Contracts Placed in Canada by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1959	1960	1961
	$000	$000	$000
Aircraft	185,891	326,428	110,265
Armament	13,035	13,985	8,134
Electronics and communication equipment	80,373	99,301	110,513
Ships	25,337	83,718	26,273
Tank-automotive	7,912	7,198	10,227
Fuels and lubricants	57,453	50,205	48,579
Clothing and equipage	19,229	6,227	11,772
Construction	66,298	50,666	89,814
Other	88,532	81,302	87,054
Total	544,059	719,031	502,632

Table 2-b.—Value of Expenditures on Canadian Government Defence Contracts Placed in Canada by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1959	1960	1961
	$000	$000	$000
Aircraft	248,221	225,417	194,036
Armament	41,178	21,174	16,945
Electronics and communication equipment	83,264	73,307	101,452
Ships	34,089	29,632	44,835
Tank-automotive	6,946	7,829	7,590
Fuels and lubricants	40,208	38,759	37,695
Clothing and equipage	20,562	4,082	7,049
Construction	66,277	63,374	65,984
Other	87,258	86,734	81,609
Total	628,004	550,309	557,195

Contracts Placed for DND in the United States and Related Expenditures

Table 3-a.—Net Value of Canadian Government Defence Contracts Placed in the United States by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1959	1960	1961
	$000	$000	$000
Aircraft	26,097	31,533	1,861
Armament	1,113	1,447	2,137
Electronics and communication equipment	294	34,023	9,729
Ships	481	349	892
Other	2,262	3,065	2,128
Total	30,247	70,417	16,747

Table 3-b.—Value of Expenditures on Canadian Government Defence Contracts Placed in the United States by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1959	1960	1961
	$000	$000	$000
Aircraft	10,412	37,025	25,325
Armament	2,610	3,019	2,456
Electronics and communication equipment	14,734	13,472	20,106
Ships	780	1,339	763
Other	2,736	3,863	3,193
Total	31,272	58,717	51,842

Contracts Placed for DND in Britain and Related Expenditures

Table 4-a.—Net Value of Canadian Government Defence Contracts Placed in Britain by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1959	1960	1961
	$000	$000	$000
Aircraft	6,178	5,187	940
Armament	4,828	4,224	1,014
Electronics and communication equipment	1,514	156	1,510
Ships	172	590	319
Tank-automotive	130	467	363
Other	1,598	1,063	876
Total	14,420	11,688	5,022

Table 4-b.—Value of Expenditures on Canadian Government Defence Contracts Placed in Britain by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1959	1960	1961
	$000	$000	$000
Aircraft	5,145	4,265	2,988
Armament	2,032	1,796	2,896
Electronics and communication equipment	1,870	982	1,439
Ships	187	232	380
Tank-automotive	416	436	403
Other	1,155	878	984
Total	10,805	8,589	9,090

Contracts by DDP to Assist Canadian Defence Industry and Related Expenditures

Table 5-a.—Net Value of Contracts Placed by the Department of Defence Production for Care, Maintenance and Custody, Establishment of Production Capacity, Source Establishment for Components, and Sustaining Technological Capability, and Value of Approvals for Capital Assistance

Category	1959	1960	1961
	$000	$000	$000
Care, maintenance and custody of Crown owned standby defence assets	162	1,030	196
Capital assistance approvals	2,416	248	206
Establishment of competitive production capacity through absorbing certain preproduction and tooling costs	856	307	1,370
Establishment of qualified sources for the production of component parts and materials	356	512	360
To sustain research and development capability in Canadian industry in order to assist the Canada-United States development and production sharing programme	.....	2,425	13,844
Total	3,790	4,522	15,976

Table 5-b.—Value of Expenditures by the Department of Defence Production for Care, Maintenance and Custody, Capital Assistance, Establishment of Production Capacity, Source Establishment for Components, and Sustaining Technological Capability

Category	1959	1960	1961
	$000	$000	$000
Care, maintenance and custody of Crown owned standby defence assets	216	570	807
Capital assistance	695	1,456	915
Establishment of competitive production capacity through absorbing certain preproduction and tooling costs	454	630	678
Establishment of qualified sources for the production of component parts and materials	171	268	499
To sustain research and development capability in Canadian industry in order to assist the Canada-United States development and production sharing programme	.....	2,033	4,636
Total	1,536	4,956	7,535

United States Prime Defence Contracts Placed in Canada and Related Expenditures

Table 6-a.—Net Value of United States Government Defence Contracts Placed in Canada through the Canadian Commercial Corporation and Defence Construction (1951) Limited

Programme	1959	1960	1961
	$000	$000	$000
Aircraft	20,543	42,764	32,675
Armament	1,141	1,097	5,781
Electronics and communication equipment	35,804	14,752	32,423
Fuels and lubricants	4,949	5,201	8,615
Construction	12,025	9,995	15,067
Other	772	1,549	2,983
Total	75,234	75,359	97,544

Table 6-b.—Value of Expenditures by the United States Government on Defence Contracts Placed in Canada through the Canadian Commercial Corporation and Defence Construction (1951) Limited

Programme	1959	1960	1961
	$000	$000	$000
Aircraft	27,661	25,638	37,269
Armament	1,870	320	2,788
Electronics and communication equipment	19,491	38,238	34,208
Fuels and lubricants	1,330	2,916	2,873
Construction	22,387	17,310	13,044
Other	526	1,103	2,008
Total	73,265	85,525	92,190

Appendix G

Report to the Minister on the Audit of the Accounts of the Department

for the year ended March 31, 1961

OTTAWA, October 27, 1961.

The Honourable Raymond O'Hurley,
Minister of Defence Production,
Ottawa, Canada.

SIR,

An examination having been made of the accounts maintained and the financial statements prepared by the Department of Defence Production for the year ended March 31, 1961, I now report that in my opinion,

(*a*) proper books of account have been kept by the Department;

(*b*) the financial statements of the Department

(i) were prepared on a basis consistent with that of the preceding year and are in agreement with the books of account;

(ii) in the case of the Balance Sheet, give a true and fair view of the state of the Department's affairs as at the end of the financial year;

(iii) in the cases of the Summary of Transactions in Equity Account (with supporting statements of Expenditure and Receipts) and the Summary of Transactions in Surplus Arising from Trading Operations, give a true and fair view of the operations of the Department for the financial year; and

(*c*) the transactions of the Department that have come under my notice have been within the powers of the Department under the Defence Production Act and any other Act applicable to the Department.

In accordance with established governmental practice, the Crown owned capital assets for which the Department is accountable are carried on the Balance Sheet at cost, without showing any deduction with respect to depreciation.

Yours faithfully,

A. M. HENDERSON,
Auditor General.

Balance Sheet as at March 31, 1961

General Account

Assets			Liabilities and Government Equity	
Cash		$ 130,009	Accounts payable	$ 77,030
Accounts receivable—			Sundry liabilities and deferred revenue	122,532
Sale of Crown plants and equipment	$12,094,156		Equity of Government of Canada, Schedule 1	234,831,770
Renegotiation of contracts, World War II	25,740			
		12,119,896		
Advances—				
Crown agencies	14,500,000			
Other	14,489			
		14,514,489		
Investments, at cost—				
Polymer Corporation Limited, capital stock	30,000,000			
Township of Toronto, 3% debentures 1961-71	287,599			
Defence Construction (1951) Limited, capital stock	30			
Canadian Arsenals Limited, capital stock	28			
		30,287,657		
Crown-owned lands, buildings, machinery and equipment, at cost—				
Including rehabilitation and installation cost				
With contractors	45,049,769			
In warehouse	4,743,817			
Advances and progress payments	13,919,389			
		63,712,975		
Crown-owned plants, at cost		12,378,789		
Canadian Arsenals Limited, plants, at cost		101,887,517		
		$235,031,332		$235,031,332

Revolving Fund

Accounts receivable	$ 1,943,331	Accounts payable		$ 1,320,923
Progress payments to suppliers	218,769	Progress payments from customers		2,404,664
Working capital advances	6,015,515	Equity of Government of Canada—		
Inventories—Strategic materials, etc., at cost	15,112,168	Revolving Fund, as provided by Defence Production Act, section 16 (authorized $100,000,000), net expenditure	$15,650,637	
		Inventory taken over by Department at inception	3,728,584	
		Surplus arising from trading operations, Schedule 2	184,975	
				19,564,196
	$23,289,783			$23,289,783

In addition to the assets list above, the Department has recorded in its books expenditure in the amount of $253,080,605 for production tooling, dies and jigs, title to which is vested in the Crown.

Approved on behalf of the Department.

D. A. GOLDEN,
Deputy Minister.

G. F. WEVILL,
Comptroller.

Certified in accordance with my report dated October 27, 1961, to the Minister of Defence Production.

A. M. HENDERSON,
Auditor General.

Schedule 1

Summary of Transactions in Equity of Government of Canada Account

for the year ended March 31, 1961

Balance brought forward April 1, 1960	$233,648,080	
Additions:		
Assets acquired from appropriations	1,234,377	
Transfer of assets from other departments and Crown agencies	6,216,552	
Increase in working capital advance to the Canadian Commercial Corporation ($2,000,000, less $1,000,000 refunded per Schedule 1 (b)	1,000,000	
		$242,099,009
Reductions:		
Receipts from sales, etc., Schedule 1 (b)	4,045,680	
Decrease in fixed assets in custody of Canadian Arsenals Ltd., as shown by the balance sheet of the company at March 31, 1961	1,185,246	
Transfer of surplus assets to Crown Assets Disposal Corporation	1,312,653	
Transfer of assets to other departments and Crown agencies	425,906	
Depreciation and other allowances on sales of buildings and equipment	182,400	
Assets written off due to termination of contracts, dismantling, etc.	105,915	
Accounts receivable written off as authorized by Parliamentary Vote 681	9,439	
		7,267,239
Balance at March 31, 1961		$234,831,770

Schedule 1 (a)

Statement of Expenditure

for the year ended March 31, 1961

Vote			
66	Departmental administration		
and	Salaries	$ 7,632,651	
121	Living allowances	120,538	
	Travelling expenses	251,980	
	Office stationery, supplies and equipment	253,904	
	Telephones and telegrams	180,486	
	Professional and special services	120,478	
	Postage	58,540	
	Freight, express and cartage	13,288	
	Rental of office accommodation	4,590	
	Publication of departmental report and other material	857	
	Sundries	14,344	
			$ 8,651,656
67	Care, maintenance and custody of standby		
and	defence plants, buildings, machine tools		
508	and production tooling		662,643
68	Capital assistance		
	Capital account—		
	Construction, improvements and acquisition of land	1,116,751	
	Equipment	22,174	
	Establishment of production capacity	45,342	
	Income account—		
	Establishment of production capacity	341,680	
			1,525,947
69	Grants to municipalities in lieu of taxes		117,998
70	Establishment of qualified sources for production of component parts and materials		
	Capital account	82,197	
	Income account	392,288	
			474,485
71	Sustainment of technological capability in		
	Canadian industry		2,907,269

72	Defence Construction (1951) Limited—		
	Administration		$ 3,030,414
	Canadian Arsenals Limited—		
73 and 509	Administration and operation		2,849,120
74	Construction and improvements	$ 39,531	
74	Equipment	197,634	
			237,165
Statutory			
	Minister of Defence Production—		
	Salary	15,000	
	Motor car allowance	2,000	
			17,000
	Total expenditure		$20,473,697

Schedule 1 (b)

Statement of Receipts

for the year ended March 31, 1961

Receipts on Income Account—		
Sales of surplus Crown assets	$ 8,118,849	
Return on investments	3,980,323	
Rentals of buildings and equipment	400,705	
Refunds of previous years' expenditure	24,533	
Miscellaneous	7,833	
		$12,532,243
Receipts on Capital Account, per Schedule 1—		
Sale of plant and equipment by the Department	4,005,127	
Repayment of debentures	21,801	
Recoveries of advances and accounts receivable	18,752	
	4,045,680	
Repayment of working capital advance	1,000,000	
		5,045,680
		$17,577,923

Schedule 2

Summary of Transactions in Surplus Arising from Trading Operations, Revolving Fund

for the year ended March 31, 1961

Balance brought forward April 1, 1960		$ 238,781
Additions:		
Sales, less cost of materials sold—		
Cloth, Sales	$ 84,758	
Cloth, Cost of Sales	71,088	
		13,670
Strategic materials, Sales	40,278	
Strategic materials, Cost of Sales	40,278	
Shipbuilding components, Sales	1,530,166	
Shipbuilding components, Cost of Sales	1,530,166	
Aircraft components, Sales	91,450	
Aircraft components, Cost of Sales	91,450	
Ordnance, Munitions, etc., Sales	8,854,145	
Ordnance, Munitions, etc., Cost of Sales	8,854,145	
		252,451
Reductions:		
Warehousing and other expenses—Cloth		
Salaries and wages	11,733	
Rent	44,389	
Sundries	3,714	
	59,836	
Warehousing expenses—Strategic materials	7,640	
		67,476
Balance at March 31, 1961		$ 184,975